

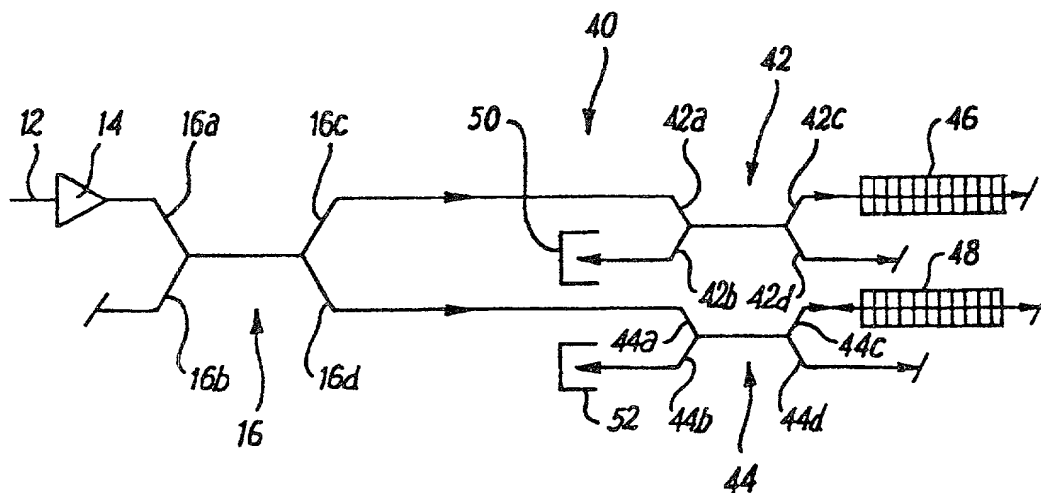
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## (54) Title: OPTICAL SPECTRUM ANALYSER



## (57) Abstract

An optical spectrum analyser (10), receiving a multi-channel optical signal (12). The optical signal (12) is passed through an optical isolator (14) and a fibre coupler (16) to a tuneable optical filter. The tuneable optical filter comprises one or more fibre Bragg gratings (18) inscribed in a length of optical fibre. The optical fibre is mounted on a means operable to apply a variable strain to the fibre, to thereby tune the peak wavelength of the Bragg grating (18) over a desired wavelength range, the tuneable optical filter thereby reflecting each channel of the input signal (12) in turn. The detector (20) therefore detects a signal only if the input signal (12) contains wavelengths corresponding to the reflection wavelength of a grating (18).